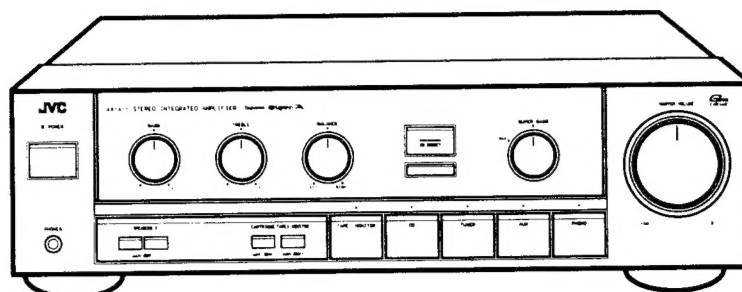


# JVC

## SERVICE MANUAL

### STEREO INTEGRATED AMPLIFIER

MODEL No. **AX-411BK**



## Contents

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## Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purpose. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (  $\triangle$  ) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage current check (Electrical shock hazard testing)

After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

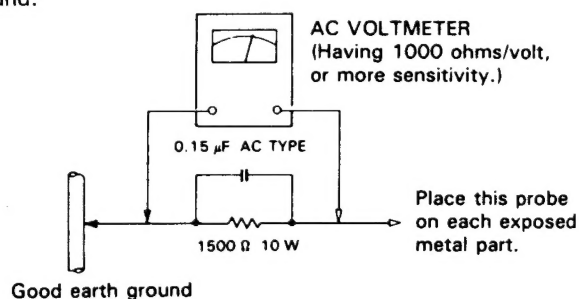
Do not use a line isolation transformer during this check.

- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
- Alternate check method

Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500  $\Omega$  10 W resistor paralleled by a 0.15  $\mu$ F AC-type capacitor between an exposed metal part and a known good earth ground.

Measure the AC voltage across the resistor with the AC voltmeter.

Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



## Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

# Specifications

## AX-411BK

### OVERALL CHARACTERISTICS

#### Output power:

100 watts per channel into 4 ohms at 1 kHz (DIN).

70 watts per channel into 8 ohms at 1 kHz (DIN).

65 watts per channel, min. RMS, both channels driven, into 8 ohms from 20 Hz to 20 kHz, with no more than 0.007% total harmonic distortion.

65 watts per channel, min. RMS, both channels driven, into 8 ohms at 1 kHz with no more than 0.003% total harmonic distortion. (measured by JVC Audio Analyzer System)

Total harmonic distortion	: 0.007% (20 Hz — 20 kHz, 8 ohms) at 65 watts
Intermodulation distortion	: 0.007% (60 Hz : 7 kHz = 4 : 1, 8 ohms) at 65 watts
Power band width	: 5 Hz — 50 kHz (IHF, 0.05%, 8 ohms both channels driven)
Frequency response	: 5 Hz — 80 kHz +0, -3 dB (8 ohms)
Damping factor	: 90 (1 kHz, 8 ohms)

#### Input terminals Input sensitivity/ impedance (1 kHz)

PHONO (MM)	: 2.5 mV/47 kohms
PHONO (MC)	: 200 $\mu$ V/100 ohms
CD/AUX/	: 200 mV/43 kohms

#### TUNER/TAPE 1, 2

#### Signal-to-noise ratio

PHONO (MM)	: 85 dB ('66 IHF)
PHONO (MC)	: 66 dB ('66 IHF)
CD/AUX/	: 104 dB ('66 IHF)
TUNER/TAPE 1, 2	
PHONO (MM)	: 82 dB ('78 IHF)
(REC OUT)	
PHONO (MC)	: 74 dB ('78 IHF)
(REC OUT)	
CD/AUX/	: 76 dB ('78 IHF)
TUNER/TAPE 1, 2	
(SP OUT)	
PHONO (MM)	: 67 dB (DIN)
CD/AUX/	: 68 dB (DIN)
TUNER/TAPE 1, 2	

Tone controls	: TREBLE: +8 $\pm$ 1 dB -8 $\pm$ 1 dB (at 10 kHz)
	: BASS: +8 $\pm$ 1 dB -8 $\pm$ 1 dB (at 100 Hz)

SUPER BASS	: +6 dB (at 50 Hz)
(Volume control at -30 dB position)	

### EQUALIZER

#### PHONO overload

capacity	
PHONO (MM)	: 100 mV (0.02% THD)
PHONO (MC)	: 8 mV (0.04% THD)
PHONO RIAA deviation	
PHONO (MM)	: $\pm$ 0.3 dB (20 Hz — 20 kHz)
PHONO (MC)	: $\pm$ 0.5 dB (20 Hz — 20 kHz)

#### Recording output

Output level/impedance	
TAPE REC-1, 2	: 200 mV/Maximum 2 kohms

### GENERAL

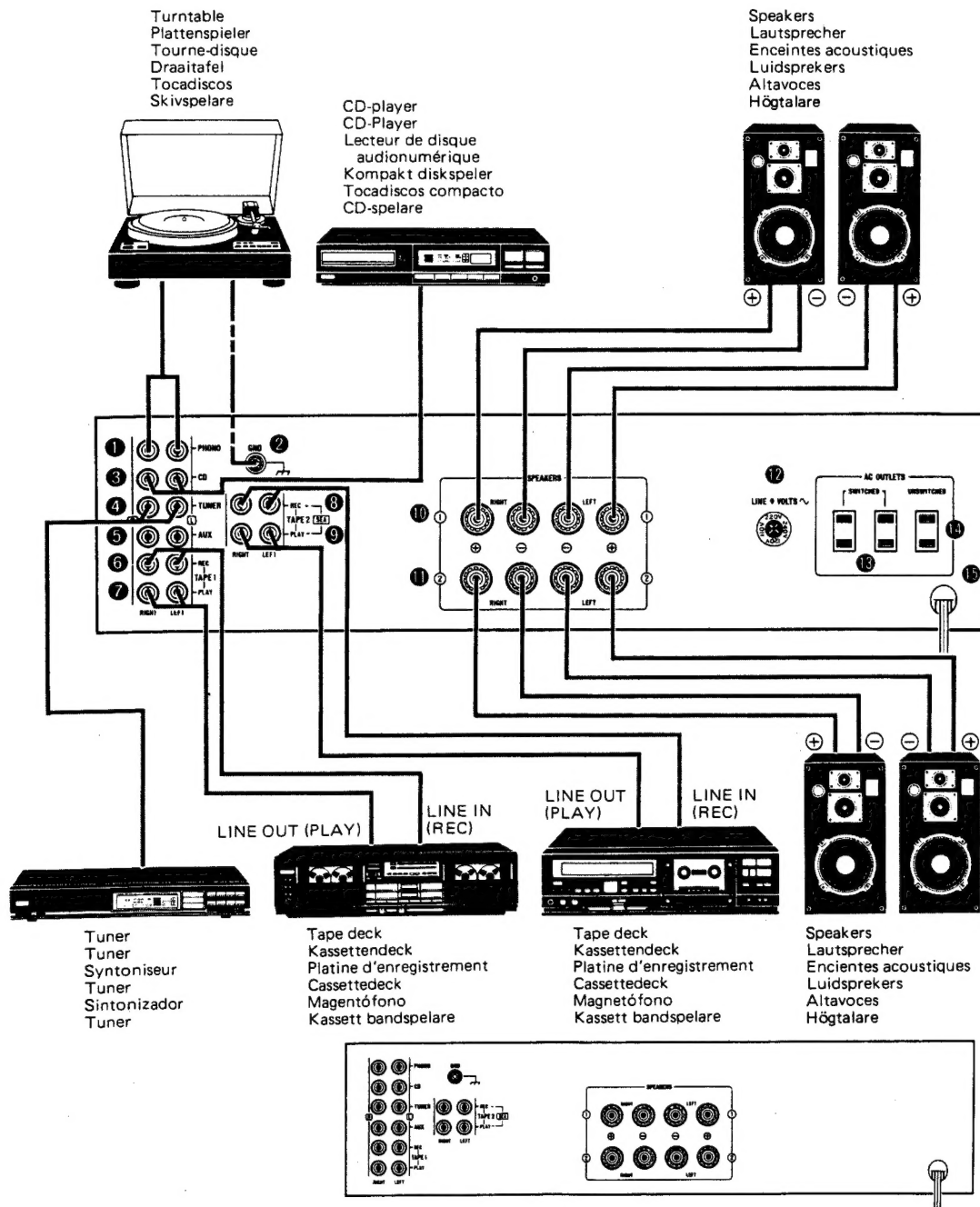
Dimensions	: 435 (W) x 127 (H) x 310 (D) mm (17-3/16" x 4-15/16" x 12-1/16")
Weight	: 7.5 kg (16.5 lbs.)

Design and specifications subject to change without notice.

### POWER SPECIFICATIONS

Areas	Line voltage & frequency	Power consumption	
		AX-311BK	AX-411BK
Continental Europe	AC 220 V~, 50 Hz	220 watts	240 watts
U.K.	AC 240 V~, 50 Hz	510 watts	590 watts
Australia			
Other areas	AC 110/120/220/240 V~ selectable, 50/60 Hz	220 watts	240 watts

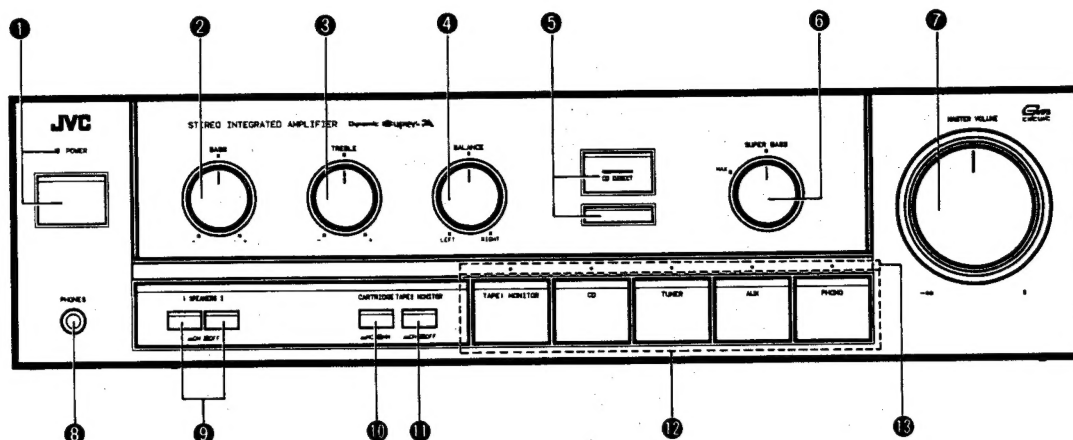
# CONNECTION DIAGRAM ANSCHLUSSDIAGRAMM SCHEMA DE RACCORDEMENTS AANSLUITINGSSCHEMA DIAGRAMA DE CONEXIONES ANSLUTNINGSSCHEMA



Provided on units for Continental Europe, the United Kingdom and Australia.  
Vorhanden an Geräten für Kontinentaleuropa, Großbritannien und Australien.  
Fourni sur les appareils pour l'Europe Continentale, le Royaume-Uni et l'Australie.  
Aanwezig op apparaten voor het Europees Vasteland, Groot-Brittannië en Australië.  
Se provee en las unidades para Europa Continental, el Reino Unido y Australia.  
För kontinentala Europa, Storbritannien och Australien.



## FRONT PANEL

**1 POWER and indicator**

Press this button to turn the power on.  
To turn the power off, press it again.  
The indicator lights when the POWER button is pressed to on.

**Notes:**

- When power is not supplied to this amplifier for 2 — 3 days, the source select button pressed before the power was switched off may be lost when the power is switched on again. If this happens, set the buttons, etc. again.
- An electronic source selector is used in this unit. When the POWER button is first switched on, two or more sources or no source may be selected. Make sure to input the source select data by pressing one of the source selectors.
- If the POWER button is pressed repeatedly to switch on and off too quickly, the same phenomenon as the above will occur.

**2 BASS**

Turn clockwise to boost bass response and counterclockwise to decrease it.

**3 TREBLE**

Turn clockwise to boost treble response and counterclockwise to decrease it.

**4 BALANCE**

Balances the volume between the left and right speakers. Usually set it to the center click position.

**5 CD DIRECT and Indicator**

Press this button to enjoy listening to the CD with good sound quality. The indicator lights and the signal fed from the CD terminals is directly connected to the volume, bypassing the circuits on the way, thus allowing you to enjoy listening to an improved sound quality.

**Note:**

- While the CD DIRECT button is pressed, the reproduced sound does not change even if the source selector (including TAPE 2 MONITOR) and BALANCE volume are operated, press the CD DIRECT button again to turn the indicator off when using these.

**6 SUPER BASS**

When sound volume is turned down, the human ear tends to become less aware of bass sound. At low sound levels the SUPER BASS knob can be used to emphasize the bass sound. For ordinary use, the knob should be set to the normal position.

**7 MASTER VOLUME**

Controls the volume of the speakers and headphones.

**8 PHONES (Headphones jack)**

Plug stereo headphones into this jack for private listening.  
If you want to listen to sound from the headphone only, press the SPEAKERS buttons to "OFF".

**9 SPEAKERS**

Press to switch the speakers connected to the SPEAKERS 1 or 2 terminals on ( — ) and off ( ■ ).

**10 CARTRIDGE**

**MC ( — ):** Press in when using an MC cartridge having an output of less than 0.5 mV.  
**MM ( ■ ):** Press again when using an MM or MC cartridge having an output of more than 0.5 mV.

**11 TAPE 2 MONITOR**

**ON ( — ):** Set to this position to listen to the tape deck connected to the TAPE 2 terminals of this unit. If your tape deck is of the 3-head type, you can monitor the recorded sound while recording by setting this button to ON.  
**OFF ( ■ ):** Keep this button set to this position, except when you want to listen to the tape deck connected to the TAPE 2 terminals of this unit.

**12 Source selector****TAPE 1 MONITOR**

Press to listen to a tape deck connected to the TAPE 1 terminals.

**CD**

Press to listen to the source connected to the CD terminals.

**TUNER**

Press to listen to radio broadcasts by a tuner connected to the TUNER terminals.

**AUX**

Press to listen to the source connected to the AUX terminals.

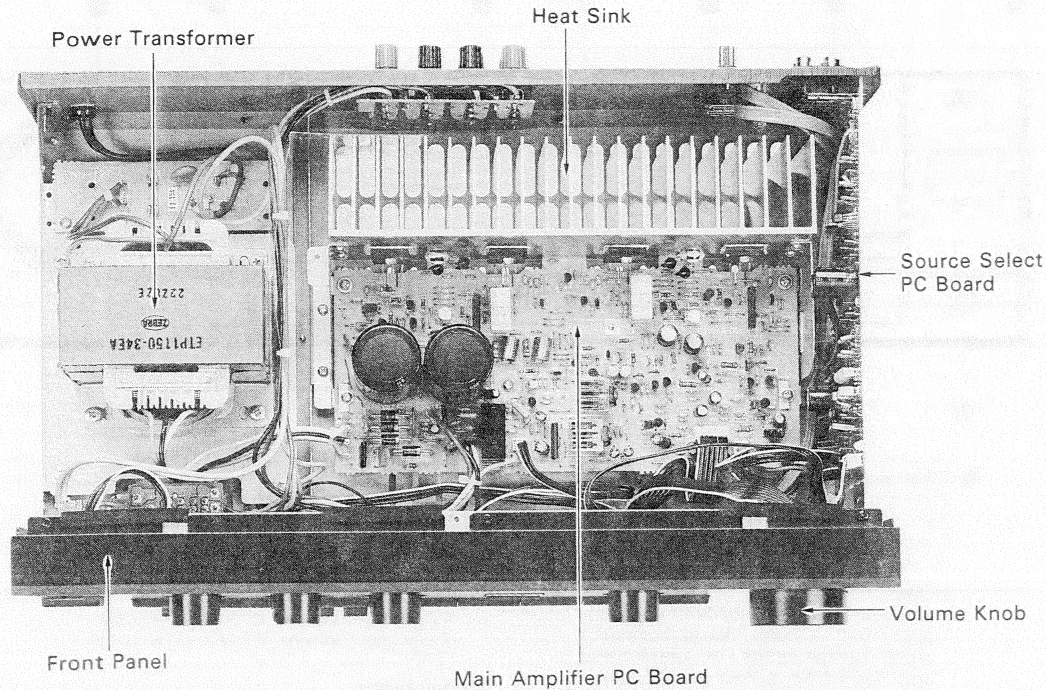
**PHONO**

Press to listen to records played by a turntable connected to the PHONO terminals.

**13 Source indicator**

The indicator corresponding to the source select button pressed lights.

## Removal Procedures



### ■ Removing the Top Cover

1. Remove six screws.
2. Remove the top cover by lifting up its rear section and pulling it backward while holding it on incline.

### ■ Removing the Front Panel

1. Remove the top cover.
2. Pull out the volume knob.
3. Remove three plastic rivets on the upper part of the front panel and three screws from the lower part.

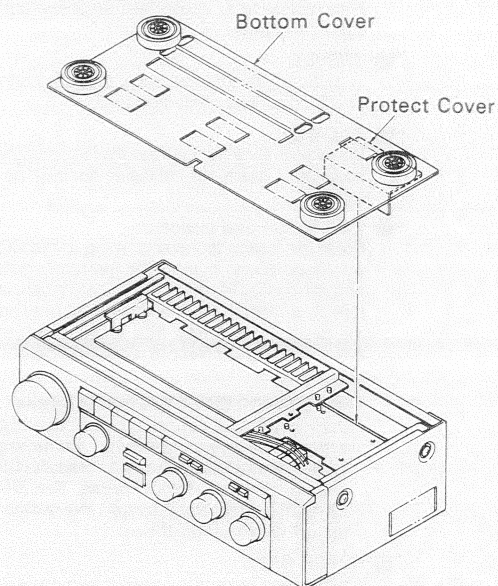
### ■ Removing the Bottom Cover

1. Remove 17 screws fixing the bottom cover.

**Note :** When installing the bottom cover, properly insert the protect cover between the power transformer and the power primary PC board as shown in the figure at right.

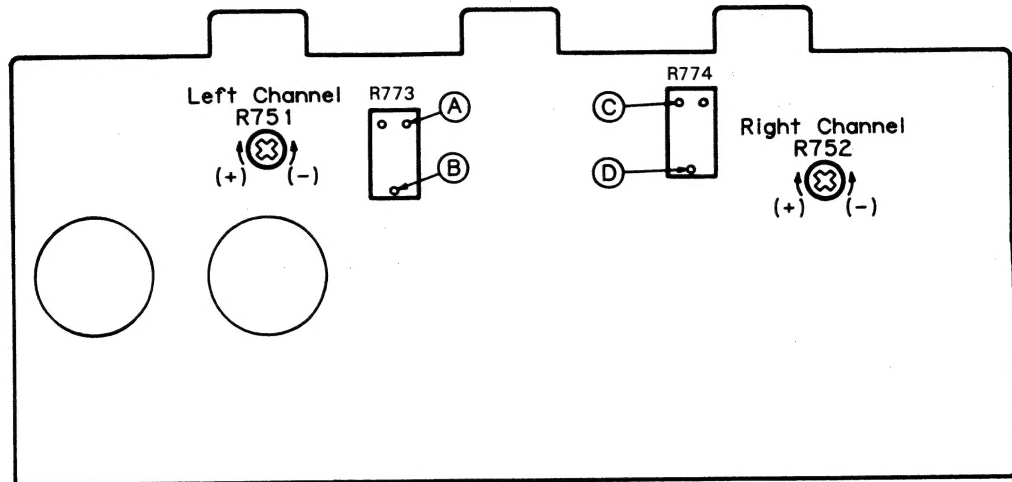
### ■ Removing the Power Transistors

1. Remove the top cover.
2. Remove the bottom cover.
3. Remove the retaining screw from the defective power transistor and replace it.



## Adjustment Procedures

### ■ Power Amplifier Idling Adjustment



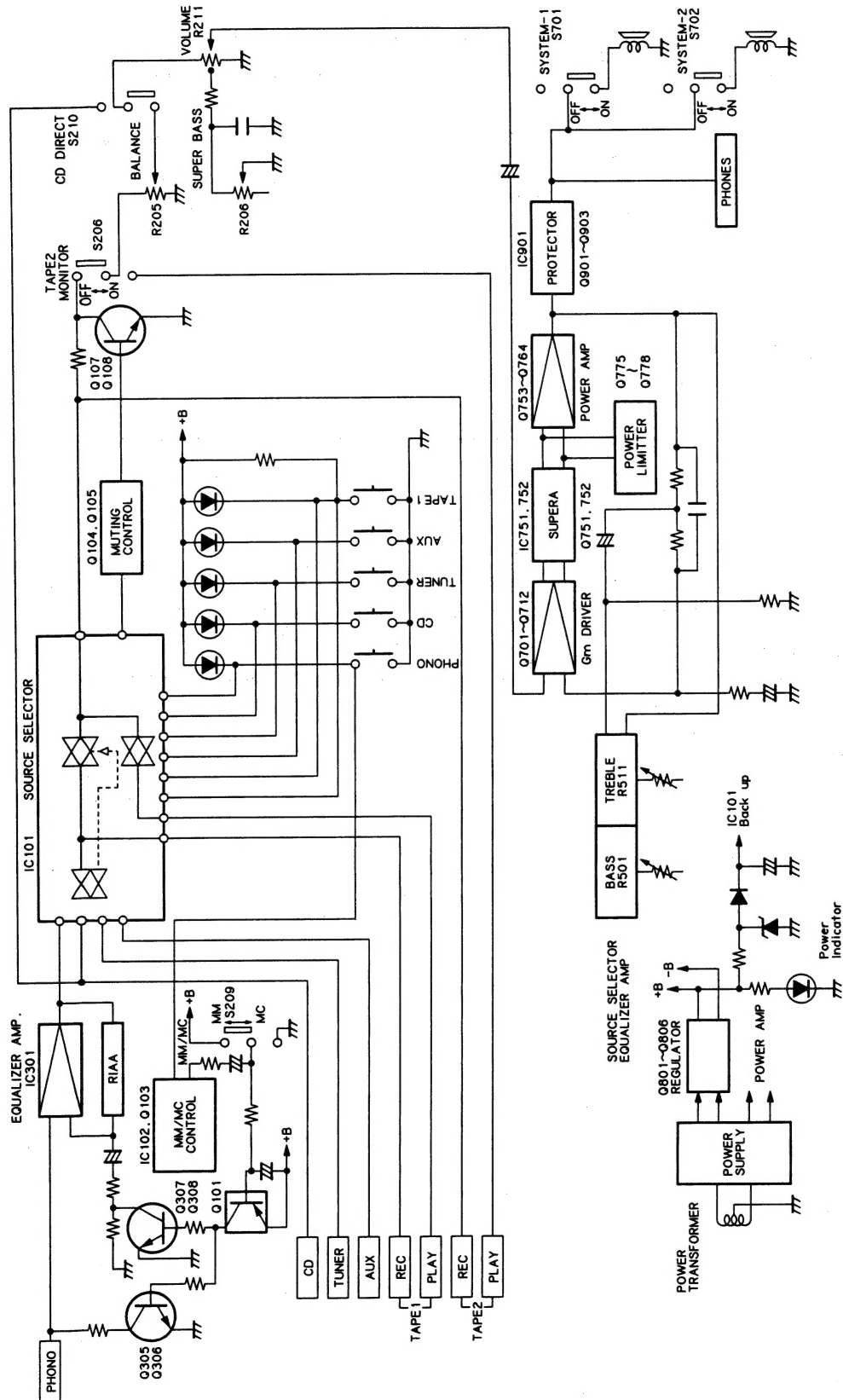
1. Before turning on the power, turn the the semi-fixed resistors (R751 for L channel and R752 for R channel) of the power amplifier circuit board fully counterclockwise.
2. Adjust the semi-fixed resistor (R751 and R752) so that the voltage at the following test points of the power amplifier circuit board is within a range of 3 ~ 5 mV after the power is turned on:  
 L channel: Measure the voltage between test point ① (emitter of Q761) and output at the test point ②.  
 R channel: Measure the voltage between test point ③ (emitter of Q762) and output at the test point ④.

3. Readjust resistors R751 and R752 about 10 minutes after the power is turned on (the heatsink temperature must be sufficiently high) so that the voltage at the test points becomes 11 mV.

Confirm that the voltage does not vary when the heatsink temperature increases further.

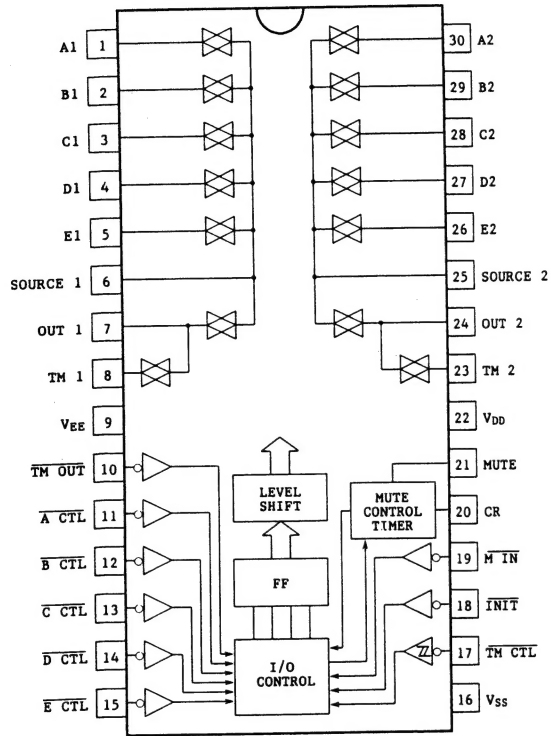
**Note:** Be sure to perform the measurement with the probes and cabinet of the measuring equipment separated from the grounding terminals of AX-411BK or other measuring equipment.

# Block Diagram

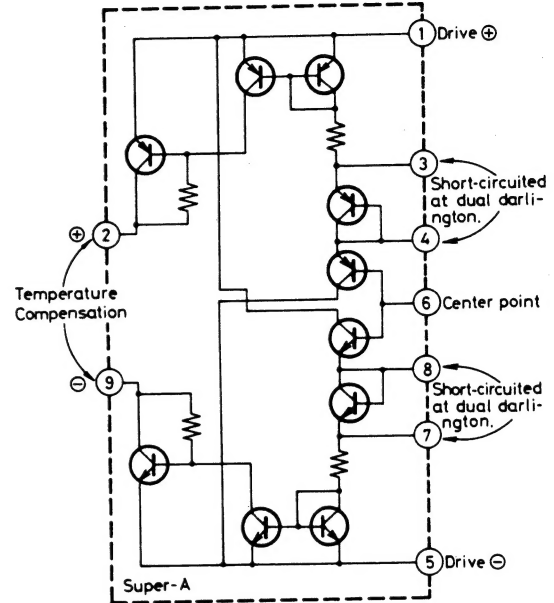


# Internal Block Diagrams of ICs

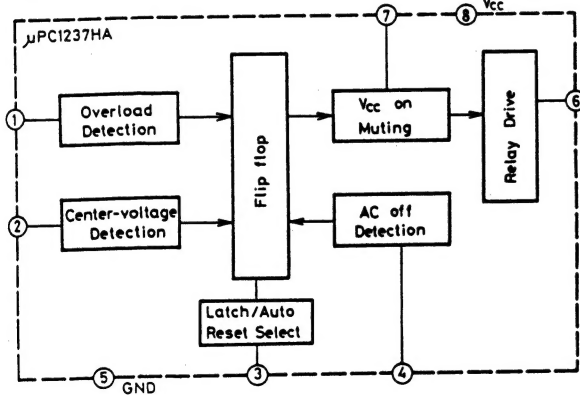
## ■ LC7818 (IC101): Analog Switch



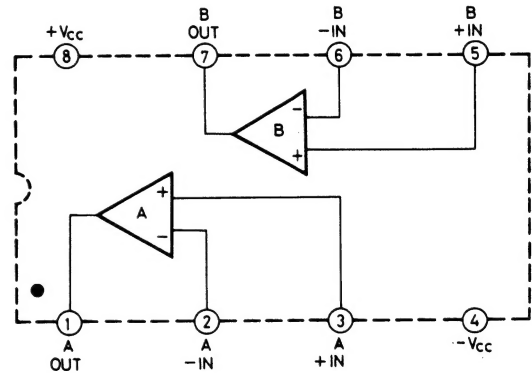
## ■ VC5022 [X, Y] (IC751, IC752): Super-A



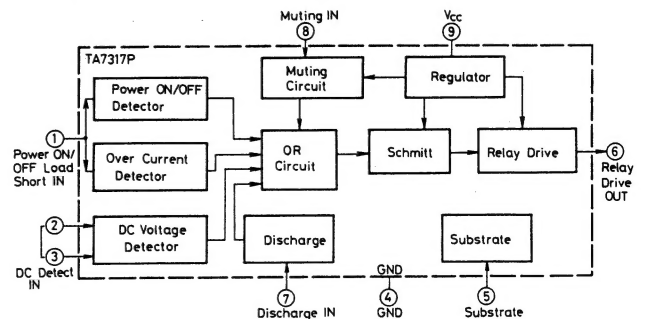
## ■ μPC1237HA (IC901): Relay Driver



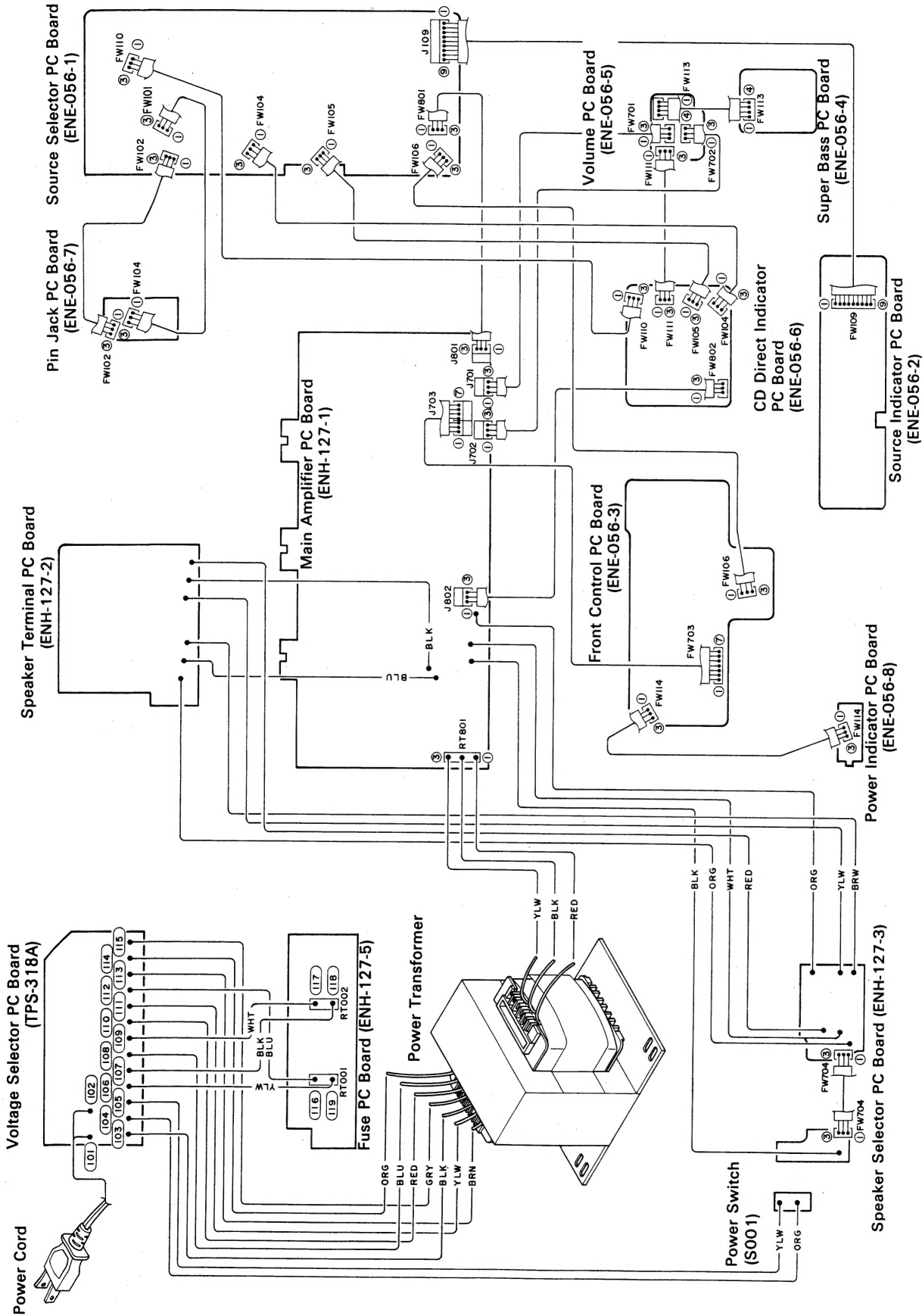
## ■ NJM4560DD (IC301): Dual OP Amp.



## ■ TA7317P (IC102): Driver



## Connection Diagram





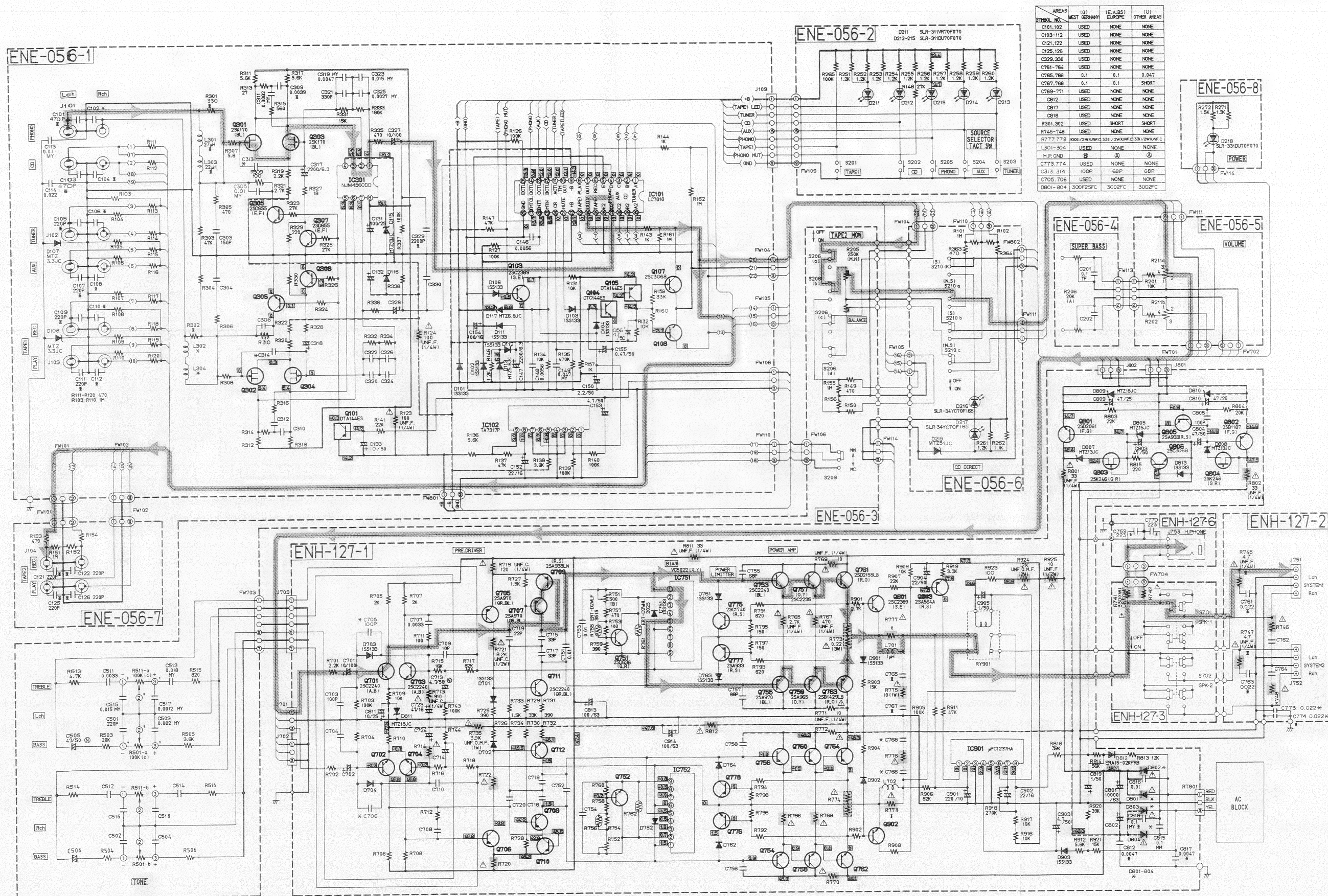
# Schematic Diagrams

## (1) Source Select and Main Amplifier Section

### Notes:

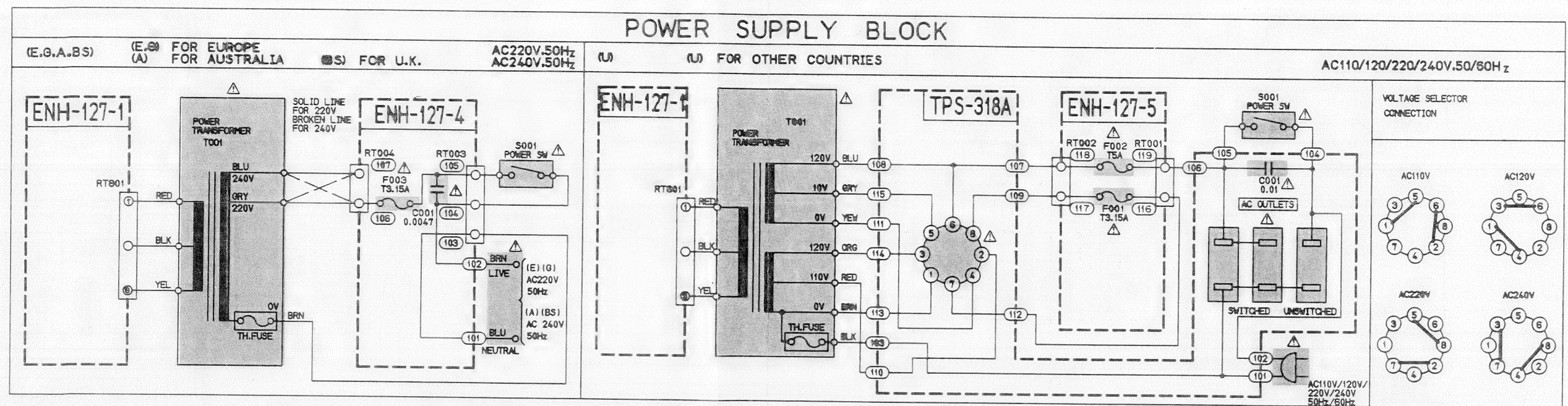
1. — indicates + B power supply.
2. - - - indicates - B power supply.
3. ■ indicates signal path.
4. ■ shows DC voltage to the chassis with no signal input.

5. When replacing the parts in the darkened area (■) and those marked with △, be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram. The design and contents are subject to change without notice.

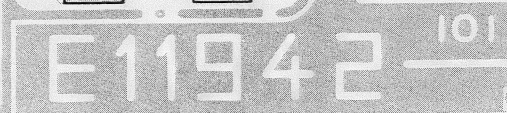




## (2) Power Supply Section

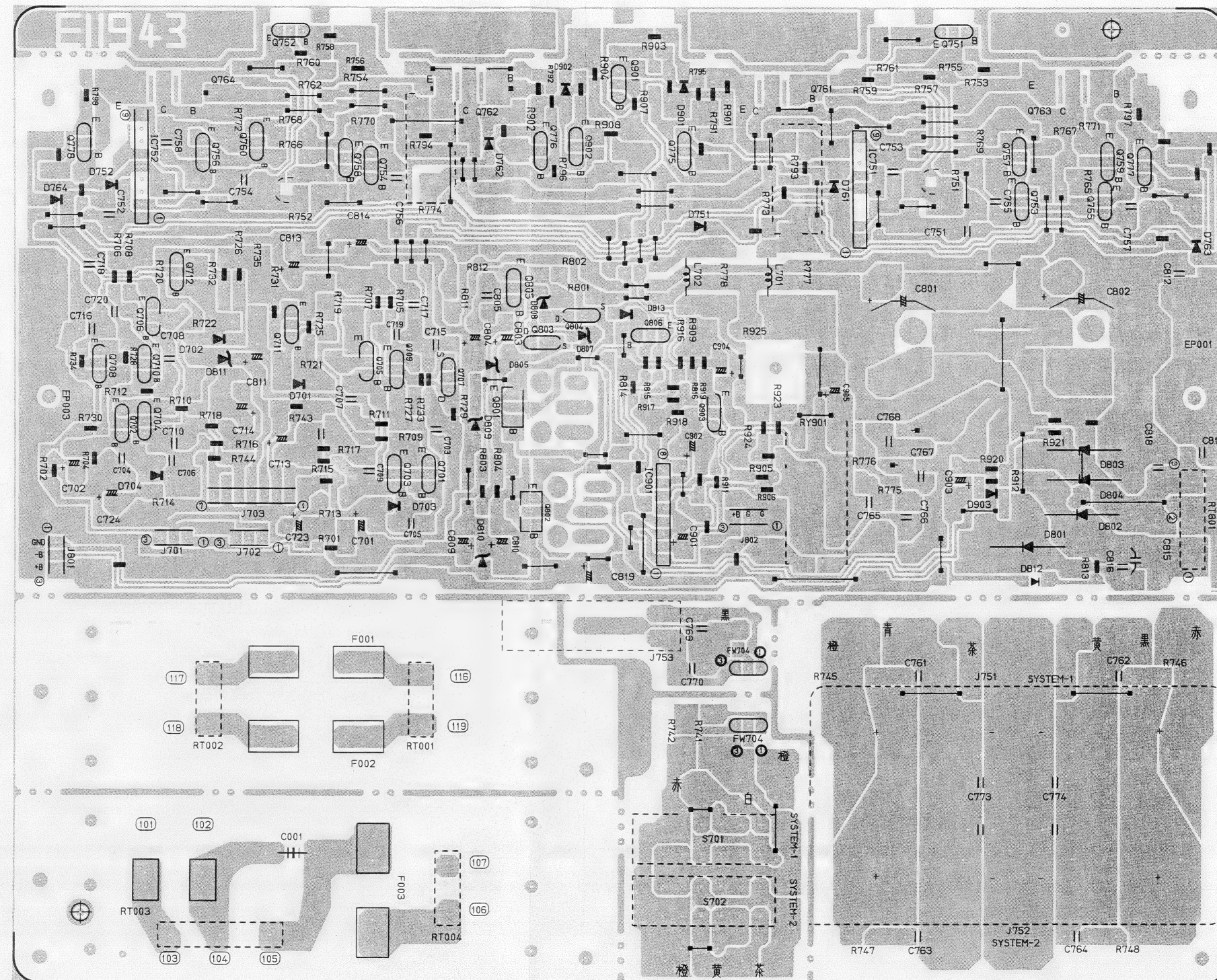








■ Main Amplifier PC Board (ENH-127)





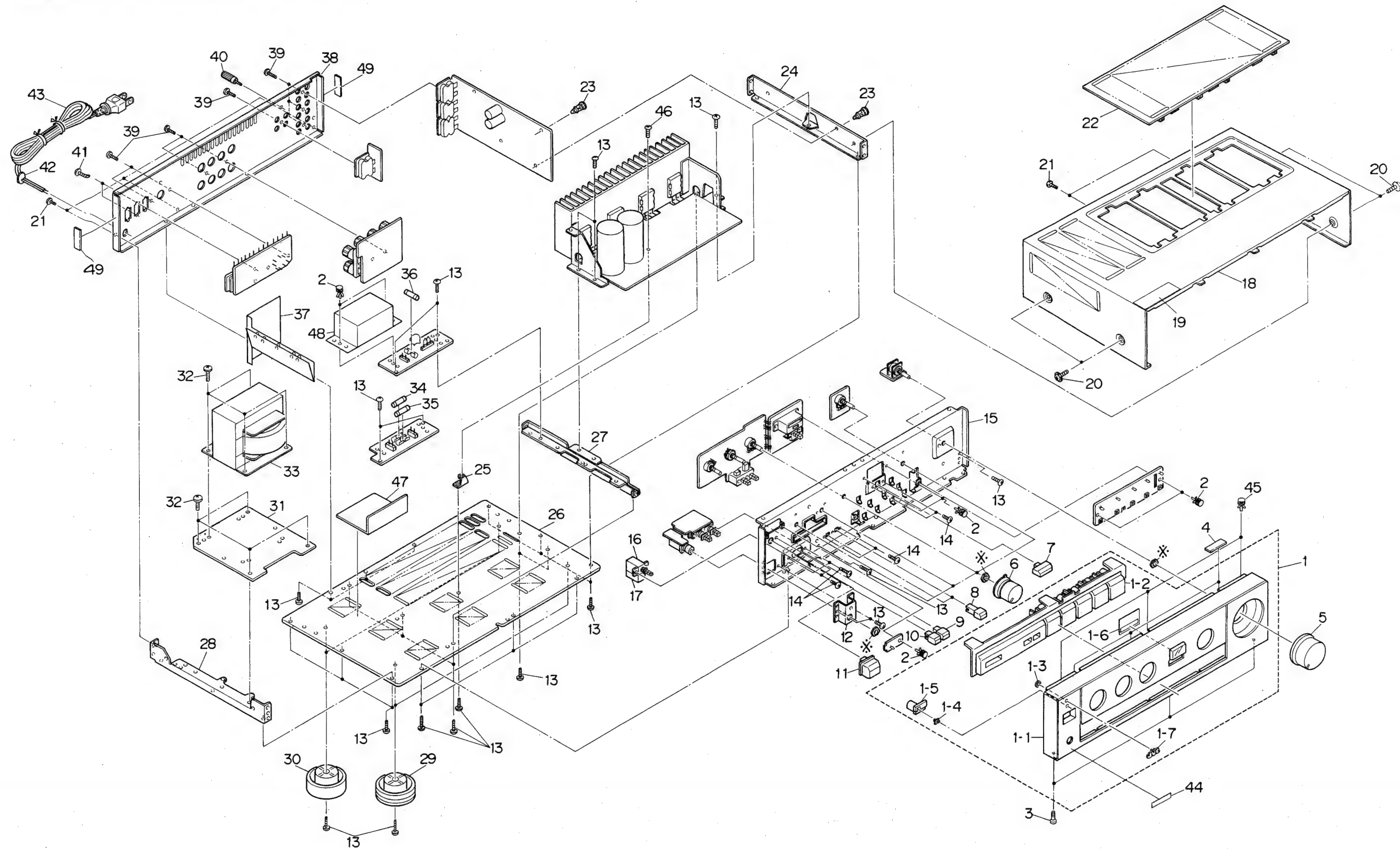
# PARTS LIST

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■ ENH-127 □ Main Amplifier PC Board Ass'y .....	2-6
■ TPS-318 <input checked="" type="checkbox"/> Voltage Selector PC Board Ass'y .....	2-9
■ ENE-056 □ Source Selector PC Board Ass'y .....	2-10
Accessories List.....	2-12
Packing Materials and Part Numbers .....	2-13



# Exploded View and Parts List



※ mark indicates attached part.

Item	Part Number	Part Name	Q'ty	Description	Areas
1	EFP-AX411BKE	Front Panel Ass'y	1		
1-1	E26391-002	Front Panel	1		
1-2	E26332-002	Push Button Ass'y	1		
1-3	E60912-003	Speed Nut	1		
1-4	E73522-001	Indicator	1		
1-5	E75286-001	Holder	1		
1-6	E75327-001	Indicator Sheet	1		
1-7	E72968-001	JVC Mark	1		
2	E48729-008	Plastic Rivet	5		U
	E48729-008	Plastic Rivet	7		Except U
3	SBSG3006M	Screw	3		
4	EXO060007N405	Felt Spacer	3		
5	E305980-001	Volume Knob	1		
6	E305981-001	Knob	4	Tone	
7	E75117-001	Push Button	1		
8	E75182-001	Push Button	2	Tape	
9	E75073-002	Push Button	1	SPK-2	
10	E75073-001	Push Button	1	SPK-1	
11	E75079-001	Power Button	1		
12	E75183-001	Head Phone Bracket	1		
13	SBSG3008CC	Screw	31		
14	SBSG3006CC	Screw	8		
15	E11953-001	Front Bracket	1		Except BS
16	QSP1106-004	Push Switch	1		BS
	QSP1106-004BS	Push Switch	1		
17	E71004-001	Switch Cover	1		
18	E26336-001	Metal Cover	1		U, A, G
19	E26336-002	Metal Cover	1		E, EF, BS
20	E67000-005	Caution Label	1		
21	E61660-004	Special Screw	4		
22	SBSG3008M	Screw	5		
23	E24134-008	Grill	1		
24	E303216-001	Fastener	2		E, EF, BS
25	E305811-001	Side Bracket	1	Right	
26	E68587-008	Bracket	1		
27	E26273-001	Bottom Cover	1		
28	E305812-002	Center Bracket	1		
29	E305810-001	Side Bracket	1	Left	
30	E75088-001	Foot	2	Front	
	E75088-002	Foot	2	Rear	
31	E305803-002	Trans Bracket	1		
32	E65389-004	Special Screw	8		
33	ETP1150-34FA	Power Transformer	1		U
	ETP1150-34EA	Power Transformer	1		E, EF, G, A
	ETP1150-34EABS	Power Transformer	1		BS
34	QMF51A2-3R15S	Fuse	1	F001	U
35	QMF51A2-5R0S	Fuse	1	F002	U
36	QMF51A2-3R15S	Fuse	1	F003	E, EF, G, A
	QMF51E2-3R15SBS	Fuse	1	F003	BS
37	E305986-001	Protect Cover	1		
38	E26334-003	Rear Panel	1		U
	E26334-004	Rear Panel	1		Except U
	E303216-190	Rating Label	1		E, EF, G
39	E73273-001	Screw	6		Except U
	E73273-001	Screw	8		U
40	E70078-001	GND. Terminal	1		
41	SDS83008M	Screw	2		U
42	QHS3876-162	Cord Stopper	1		Except BS
43	QHS3876-162BS	Cord Stopper	1		BS
	QMP7600-200	Power Cord	1		U
44	QMP3900-200	Power Cord	1		E, EF, G
	QMP2560-244	Power Cord	1		A
	QMP9017-008BS	Power Cord	1		BS
45	E49267-001	Origin Marking Label	1		
46	E48729-009	Plastic Rivet	3		BS
47	GBS83008CC	Screw	1		
48	E75353-001	Protect Cover	1		Except U
49	E30617-001	Protect Cover	1		Except U
	EXO040010R10S10	Spacer	2		

## The Marks for Designated Areas

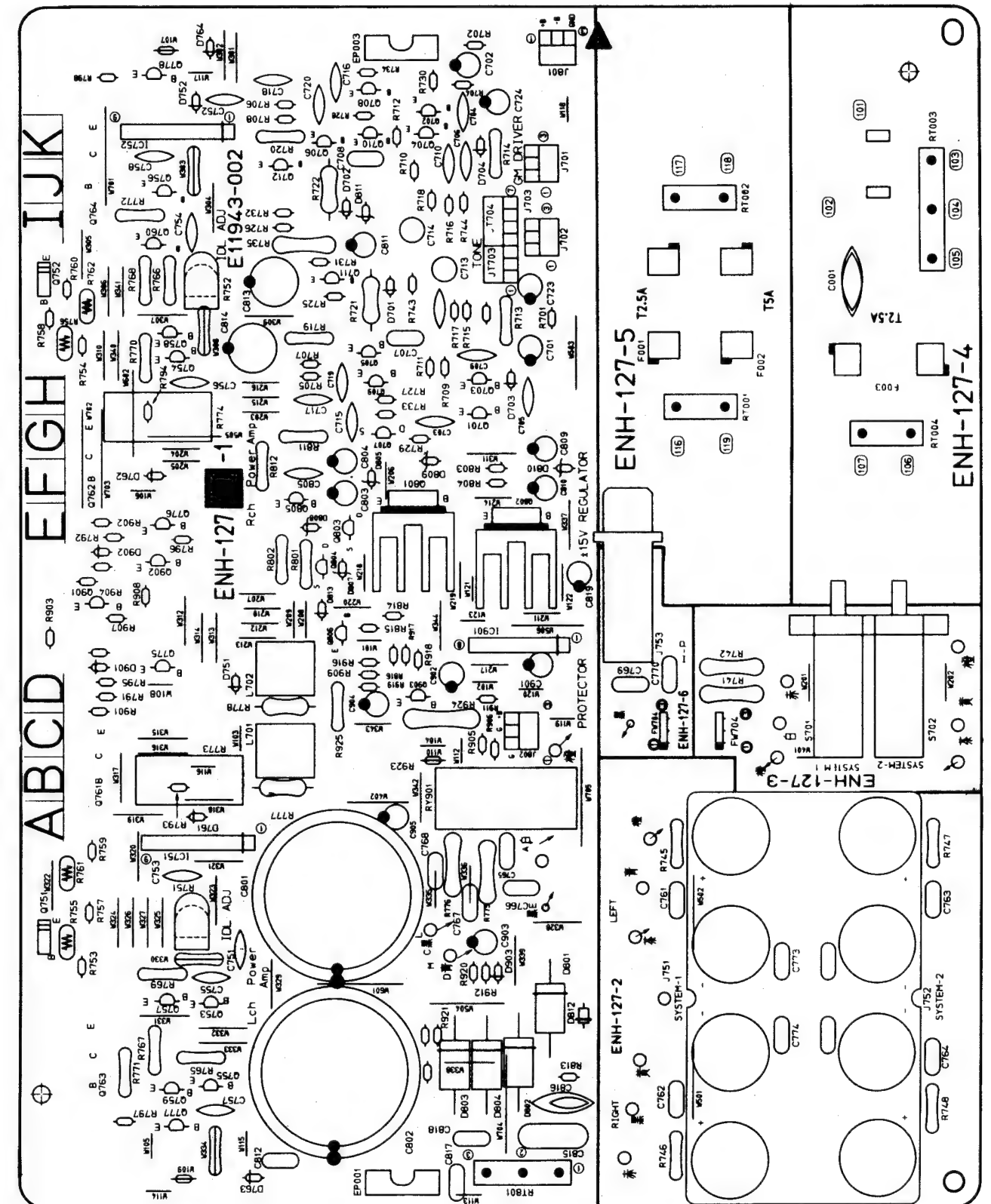
A.....	Australia	BS.....	the U.K.
G.....	West Germany	U.....	Other Countries
E, EF.....	Continental Europe	No mark	Indicates all areas.

⚠: Safety Parts

## Printed Circuit Board Ass'y and Parts List

■ ENH-127 □ Main Amplifier PC Board Ass'y

Note: ENH-127 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENH-127 <b>E</b>	Other Countries
ENH-127 <b>F</b>	Australia, Continental Europe
ENH-127 <b>G</b>	West Germany
ENH-127 <b>H</b> BS	the U.K.

## Transistors

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
Q701	2SC2240(A,B)	SILICON	TOSHIBA	
Q702	2SC2240(A,B)	SILICON	TOSHIBA	
Q703	2SC2240(A,B)	SILICON	TOSHIBA	
Q704	2SC2240(A,B)	SILICON	TOSHIBA	
Q705	2SA970(GR,BL)	SILICON	TOSHIBA	
Q706	2SA970(GR,BL)	SILICON	TOSHIBA	
Q707	2SA970(GR,BL)	SILICON	TOSHIBA	
Q708	2SA970(GR,BL)	SILICON	TOSHIBA	
Q709	2SA933LN(R,S)	SILICON	ROHM	
Q710	2SA933LN(R,S)	SILICON	ROHM	
Q711	2SC2240(GR,BL)	SILICON	TOSHIBA	
Q712	2SC2240(GR,BL)	SILICON	TOSHIBA	
Q751	2SD636(Q,R)	SILICON	MATSUSHITA	
Q752	2SD636(Q,R)	SILICON	MATSUSHITA	
Q753	2SC2240(BL)	SILICON	TOSHIBA	
Q754	2SC2240(BL)	SILICON	TOSHIBA	
Q755	2SA970(BL)	SILICON	TOSHIBA	
Q756	2SA970(BL)	SILICON	TOSHIBA	
Q757	2SC2235(O,Y)	SILICON	TOSHIBA	
Q758	2SC2235(O,Y)	SILICON	TOSHIBA	
Q759	2SA965(O,Y)	SILICON	TOSHIBA	
Q760	2SA965(O,Y)	SILICON	TOSHIBA	
Q761	2SD2155LB(R,O)	SILICON	TOSHIBA	
Q762	2SD2155LB(R,O)	SILICON	TOSHIBA	
Q763	2SB1429LB(R,O)	SILICON	TOSHIBA	
Q764	2SB1429LB(R,O)	SILICON	TOSHIBA	
Q775	2SC1740S(R,S)	SILICON	ROHM	
Q776	2SC1740S(R,S)	SILICON	ROHM	
Q777	2SA933S(R,S)	SILICON	ROHM	
Q778	2SA933S(R,S)	SILICON	ROHM	
Q801	2SD2061(F,G)	SILICON	ROHM	
Q802	2SB1187(F,G)	SILICON	ROHM	
Q803	2SK246(GR)	F.E.T	TOSHIBA	
Q804	2SK246(GR)	F.E.T	TOSHIBA	
Q805	2SA933S(R,S)	SILICON	ROHM	
Q806	2SC3068	SILICON	SANYO	
Q901	2SC2389(S,E)	SILICON	ROHM	
Q902	2SC2389(S,E)	SILICON	ROHM	
Q903	2SA564A(R,S)	SILICON	MATSUSHITA	

△ : SAFETY PARTS

## I.C.s

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
IC751	VC5022(X,Y)	I.C.	ROHM	
IC752	VC5022(X,Y)	I.C.	ROHM	
IC901	UPC1237HA	I.C.	RYOUSAN	

△ : SAFETY PARTS

## Diodes

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
D701	1SS133	SILICON	ROHM	
D702	1SS133	SILICON	ROHM	
D703	1SS133	SILICON	ROHM	
D704	1SS133	SILICON	ROHM	
D751	1SS133	SILICON	ROHM	
D752	1SS133	SILICON	ROHM	
D761	1SS133	SILICON	ROHM	
D762	1SS133	SILICON	ROHM	
D763	1SS133	SILICON	ROHM	
D764	1SS133	SILICON	ROHM	
D801	30D2FC	SILICON	NIHONINTER	E
D801	30D2FC	SILICON	NIHONINTER	F
D801	30DF2SFC	SILICON	NIHONINTER	G
D801	30D2FC	SILICON	NIHONINTER	HBS
D802	30D2FC	SILICON	NIHONINTER	E

## Diodes

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
D802	30D2FC	SILICON	NIHONINTER	F
D802	30DF2SFC	SILICON	NIHONINTER	G
D802	30D2FC	SILICON	NIHONINTER	HBS
D803	30D2FC	SILICON	NIHONINTER	E
D803	30D2FC	SILICON	NIHONINTER	F
D803	30DF2SFC	SILICON	NIHONINTER	G
D803	30D2FC	SILICON	NIHONINTER	HBS
D804	30D2FC	SILICON	NIHONINTER	E
D804	30D2FC	SILICON	NIHONINTER	F
D804	30DF2SFC	SILICON	NIHONINTER	G
D804	30D2FC	SILICON	NIHONINTER	HBS
D805	MTZ15JC	SILICON	NIHONINTER	F
D807	MTZ13JC	ZENER	ROHM	
D808	MTZ13JC	ZENER	ROHM	
D809	MTZ18JC	ZENER	ROHM	
D810	MTZ18JC	ZENER	ROHM	
D811	MTZ18JC	ZENER	ROHM	
D812	ERA15-02L19	SILICON	KYODOU	
D813	1SS133	SILICON	ROHM	
D901	1SS133	SILICON	ROHM	
D902	1SS133	SILICON	ROHM	
D903	1SS133	SILICON	ROHM	

△ : SAFETY PARTS

## Capacitors

ITEM	PART NUMBER	DESCRIPTION		AREA
C001	QCZ9019-472	4700PF	CERAMIC	F
C001	QCZ9019-472	4700PF	CERAMIC	G
C001	QCZ9019-472BS	4700PF	CERAMIC	HBS
C701	EETB2AM-106E	10MF	100V ELECTRO	
C702	EETB2AM-106E	10MF	100V ELECTRO	
C703	QCS21HJ-101	100PF	50V CERAMIC	
C704	QCS21HJ-101	100PF	50V CERAMIC	
C707	QFN81HK-332	3300PF	50V MYLAR	
C708	QFN81HK-332	3300PF	50V MYLAR	
C709	QCS21HJ-100	10PF	50V CERAMIC	
C710	QCS21HJ-100	10PF	50V CERAMIC	
C713	QEN51HM-475	4.7MF	50V NON POLE	
C714	QEN51HM-475	4.7MF	50V NON POLE	
C715	QCS21HJ-330	33PF	50V CERAMIC	
C716	QCS21HJ-330	33PF	50V CERAMIC	
C717	QCS21HJ-330	33PF	50V CERAMIC	
C718	QCS21HJ-330	33PF	50V CERAMIC	
C719	QCS21HJ-220	22PF	50V CERAMIC	
C720	QCS21HJ-220	22PF	50V CERAMIC	
C723	QETB1CM-476	47MF	16V ELECTRO	
C724	QETB1CM-476	47MF	16V ELECTRO	
C751	QCF21HP-103	0.01MF	50V CERAMIC	
C752	QCF21HP-103	0.01MF	50V CERAMIC	
C753	QCF21HP-103	0.01MF	50V CERAMIC	
C754	QCF21HP-103	0.01MF	50V CERAMIC	
C755	QCS32HJ-680	68PF	500V CERAMIC	
C756	QCS32HJ-680	68PF	500V CERAMIC	
C757	QCS32HJ-680	68PF	500V CERAMIC	
C758	QCS32HJ-680	68PF	500V CERAMIC	
C761	QFN81HK-223	0.022MF	50V MYLAR	G
C762	QFN81HK-223	0.022MF	50V MYLAR	G
C763	QFN81HK-223	0.022MF	50V MYLAR	G
C764	QFN81HK-223	0.022MF	50V MYLAR	G
C765	QFN81HK-104	0.1MF	50V MYLAR	
C766	QFN81HK-104	0.1MF	50V MYLAR	
C767	QFN81HK-104	0.1MF	50V MYLAR	
C768	QFN81HK-104	0.1MF	50V MYLAR	
C769	QCF21HP-222	2200PF	50V CERAMIC	G
C770	QCF21HP-222	2200PF	50V CERAMIC	G
C771	QFN81HK-223	0.022MF	50V MYLAR	G
C772	QFN81HK-223	0.022MF	50V MYLAR	G
C801	EEW6304-109E	10000MF	63V ELECTRO	
C802	EEW6304-109E	10000MF	63V ELECTRO	
C803	QETB1HM-476	47MF	50V ELECTRO	
C804	QETB1HM-476	47MF	50V ELECTRO	
C805	QCS21HJ-101	100PF	50V CERAMIC	
C809	QETB1EM-476	47MF	25V ELECTRO	
C810	QETB1EM-476	47MF	25V ELECTRO	
C811	QETB1EM-106	10MF	25V ELECTRO	
C812	QFN32AK-472	4700PF	100V MYLAR	G
C813	QETB1JM-107	100MF	63V ELECTRO	
C814	QETB1JM-107	100MF	63V ELECTRO	
C815	QFH42EK-104	0.1MF	250V M.MYLAR	
C816	QCE22HP-103A	0.01MF	500V CERAMIC	
C817	QFN82AK-472	4700PF	100V MYLAR	G
C818	QFN82AK-104	0.1MF	100V MYLAR	
C819	QETB1HM-105	1MF	50V ELECTRO	
C901	QETB1AM-227	220MF	10V ELECTRO	
C902	QETB1CM-226	22MF	16V ELECTRO	
C903	QETB1HM-475	4.7MF	50V ELECTRO	
C904	QETB1HM-226	22MF	50V ELECTRO	
C905	QETB1HM-105	1MF	50V ELECTRO	

△ : SAFETY PARTS

## Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R701	QRD167J-222	2.2K 1/6W CARBON	
R702	QRD167J-222	2.2K 1/6W CARBON	
R703	QRD167J-104	100K 1/6W CARBON	
R704	QRD167J-104	100K 1/6W CARBON	
R705	QRD167J-202	2K 1/6W CARBON	
R706	QRD167J-202	2K 1/6W CARBON	
R707	QRD167J-202	2K 1/6W CARBON	
R708	QRD167J-202	2K 1/6W CARBON	
R709	QRD167J-103	10K 1/6W CARBON	
R710	QRD167J-103	10K 1/6W CARBON	
R711	QRD167J-101	100 1/6W CARBON	
R712	QRD167J-101	100 1/6W CARBON	
R713	QRD14CJ-911S	910 1/4W UNF. CARBON	
R714	QRD14CJ-911S	910 1/4W UNF. CARBON	
R715	QRD167J-163	16K 1/6W CARBON	
R716	QRD167J-163	16K 1/6W CARBON	
R717	QRD167J-823	82K 1/6W CARBON	
R718	QRD167J-823	82K 1/6W CARBON	
R719	QRD14CJ-121S	120 1/4W UNF. CARBON	
R720	QRD14CJ-121S	120 1/4W UNF. CARBON	
R721	QRD125J-822	8.2K 1/2W UNF. CARBON	
R722	QRD125J-822	8.2K 1/2W UNF. CARBON	
R725	QRD167J-391	390 1/6W CARBON	
R726	QRD167J-391	390 1/6W CARBON	
R727	QRD167J-152	1.5K 1/6W CARBON	
R728	QRD167J-152	1.5K 1/6W CARBON	
R729	QRD167J-333	33K 1/6W CARBON	
R730	QRD167J-333	33K 1/6W CARBON	
R731	QRD167J-391	390 1/6W CARBON	
R732	QRD167J-391	390 1/6W CARBON	
R733	QRD167J-152	1.5K 1/6W CARBON	
R734	QRD167J-152	1.5K 1/6W CARBON	
R735	QRG01CJ-392A	3.9K 1W O.M.FILM	
R741	QRG01CJ-331A	330 1W O.M.FILM	
R742	QRG01CJ-331A	330 1W O.M.FILM	
R743	QRD167J-104	100K 1/6W CARBON	
R744	QRD167J-104	100K 1/6W CARBON	
R745	QRZ0077-4R7S	4.7 1/4W UNF. CARBON	G
R746	QRZ0077-4R7S	4.7 1/4W UNF. CARBON	G
R747	QRZ0077-4R7S	4.7 1/4W UNF. CARBON	G
R748	QRZ0077-4R7S	4.7 1/4W UNF. CARBON	G
R751	QVPE601-501	500 0.15W VARIABLE	
R752	QVPE601-501	500 0.15W VARIABLE	
R753	QRD167J-101	100 1/6W CARBON	
R754	QRD167J-101	100 1/6W CARBON	
R755	ERT-D2WFL351S	350 1/4W THERMISTOR	
R756	ERT-D2WFL351S	350 1/4W THERMISTOR	
R757	QRD167J-471	470 1/6W CARBON	
R758	QRD167J-471	470 1/6W CARBON	
R759	QRD167J-391	390 1/6W CARBON	
R760	QRD167J-391	390 1/6W CARBON	
R761	ERT-D2WHL202S	2K 1/4W THERMISTOR	
R762	ERT-D2WHL202S	2K 1/4W THERMISTOR	
R765	QRZ0077-272	2.7K 1/4W FUSIBLE	
R766	QRZ0077-272	2.7K 1/4W FUSIBLE	
R767	QRZ0077-471	470 1/4W FUSIBLE	
R768	QRZ0077-471	470 1/4W FUSIBLE	
R769	QRZ0077-100	10 1/4W FUSIBLE	
R770	QRZ0077-100	10 1/4W FUSIBLE	
R771	QRZ0077-100	10 1/4W FUSIBLE	
R772	QRZ0077-100	10 1/4W FUSIBLE	
R773	ERF032K-R22	0.22 3W CEMENT	
R774	ERF032K-R22	0.22 3W CEMENT	
R775	QRG01CJ-100A	10 1W O.M.FILM	
R776	QRG01CJ-100A	10 1W O.M.FILM	
R777	QRD125J-101	100 1/2W UNF. CARBON	G
R777	QRD125J-330	33 1/2W UNF. CARBON	E
R777	QRD125J-330	33 1/2W UNF. CARBON	F
R777	QRD125J-330	33 1/2W UNF. CARBON	HBS
R778	QRD125J-101	100 1/2W UNF. CARBON	G
R778	QRD125J-330	33 1/2W UNF. CARBON	E
R778	QRD125J-330	33 1/2W UNF. CARBON	F
R778	QRD125J-330	33 1/2W UNF. CARBON	HBS
R791	QRD167J-621	620 1/6W CARBON	
R792	QRD167J-621	620 1/6W CARBON	
R793	QRD167J-621	620 1/6W CARBON	
R794	QRD167J-621	620 1/6W CARBON	
R795	QRD167J-151	150 1/6W CARBON	
R796	QRD167J-151	150 1/6W CARBON	
R797	QRD167J-151	150 1/6W CARBON	

## Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R798	QRD167J-151	150 1/6W CARBON	
R801	QRZ0077-330	33 1/4W FUSIBLE	
R802	QRZ0077-330	33 1/4W FUSIBLE	
R803	QRD167J-223	22K 1/6W CARBON	
R804	QRD167J-203	20K 1/6W CARBON	
R811	QRZ0077-330	33 1/4W FUSIBLE	
R812	QRZ0077-330	33 1/4W FUSIBLE	
R813	QRD167J-123	12K 1/6W CARBON	
R814	QRD167J-563	56K 1/6W CARBON	
R815	QRD167J-221	220 1/6W CARBON	
R816	QRD167J-393	39K 1/6W CARBON	
R901	QRD167J-272	2.7K 1/6W CARBON	
R902	QRD167J-272	2.7K 1/6W CARBON	
R903	QRD167J-153	15K 1/6W CARBON	
R904	QRD167J-153	15K 1/6W CARBON	
R905	QRD167J-104	100K 1/6W CARBON	
R906	QRD167J-823	82K 1/6W CARBON	
R907	QRD167J-223	22K 1/6W CARBON	
R908	QRD167J-223	22K 1/6W CARBON	
R909	QRD167J-103	10K 1/6W CARBON	
R911	QRD167J-473	47K 1/6W CARBON	
R912	QRD167J-562	5.6K 1/6W CARBON	
R916	QRD167J-103	10K 1/6W CARBON	
R917	QRD167J-103	10K 1/6W CARBON	
R918	QRD167J-274	270K 1/6W CARBON	
R919	QRD167J-332	3.3K 1/6W CARBON	
R920	QRD167J-393	39K 1/6W CARBON	
R921	QRD167J-153	15K 1/6W CARBON	
R923	QRD167J-101	100 1/6W CARBON	
R924	QRG02CJ-122A	1.2K 2W O.M.FILM	
R925	QRZ0077-100	10 1/4W FUSIBLE	

Δ : SAFETY PARTS

## Others

ITEM	PART NUMBER	DESCRIPTION	AREA
EMG7331-002U		FUSE CLIP	
EMG7331-002		FUSE CLIP	
E11943-002		CIRCUIT BOARD	E
E11943-002		CIRCUIT BOARD	F
E11943-002		CIRCUIT BOARD	G
E11943-002BS		CIRCUIT BOARD	HBS
E300209-030		HEAT SINK	
E305804-001		INSTRUCTION BOOK	
E305805-001		INSTRUCTION BOOK	
E33754-001		TIE BAND	
E65508-002		TAB	F
E65508-002		TAB	G
E65508-002		TAB	HBS
E70945-H25		HEAT SINK	
E73525-003		SCREW	
GBSB3008CC		SCREW	
SBSB3008CC		SCREW	
SBSB3008CC		SCREW	
J701	EMV7122-003	CONNECTOR	
J702	EMV7122-003	CONNECTOR	
J751	EMB00TP-801C	SPEAKER TERMINAL	
J752	EMB00TP-801C	SPEAKER TERMINAL	
J753	QMS6A40-021	HEADPHONE JACK	
J801	EMV7122-003	CONNECTOR	
J802	EMV7122-003	CONNECTOR	
L701	EQL0001-1R0	INDUCTOR	
L702	EQL0001-1R0	INDUCTOR	
S701	QST4231-E04	PUSH SWITCH	
S702	QST4231-E04	PUSH SWITCH	
EP001	E70859-001	EARTH PLATE	G
EP003	E70859-001	EARTH PLATE	
FW704	EWR338-08SST	FLAT WIRE	
JT703	EMV7122-003	CONNECTOR	
JT704	EMV7122-004	CONNECTOR	
RT001	E67764-202	WRAPPING TERMINAL	E



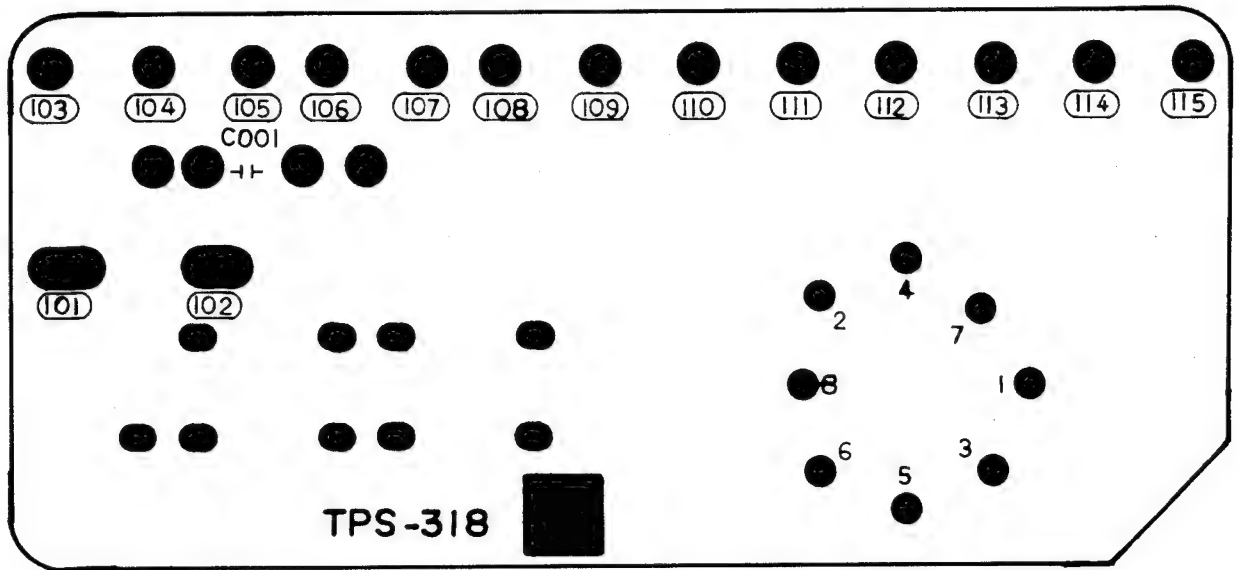
# Others

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	RT002	E67764-202	WRAPPING TERMINAL	E
	RT003	E67764-203	WRAPPING TERMINAL	F
	RT003	E67764-203	WRAPPING TERMINAL	G
	RT003	E67764-203	WRAPPING TERMINAL	HBS
	RT004	E67764-202	WRAPPING TERMINAL	F
	RT004	E67764-202	WRAPPING TERMINAL	G
	RT004	E67764-202	WRAPPING TERMINAL	HBS
	RT801	E67764-103	WRAPPING TERMINAL	
	RY901	ESK5D24-218	RELAY	

△ : SAFETY PARTS

## ■ TPS-318 A Voltage Selector PC Board Ass'y

(Except Australia, Continental Europe, West Germany, the U.K.)



### Capacitors

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	C001	QCZ9018-103	0.01MF CERAMIC	

△ : SAFETY PARTS

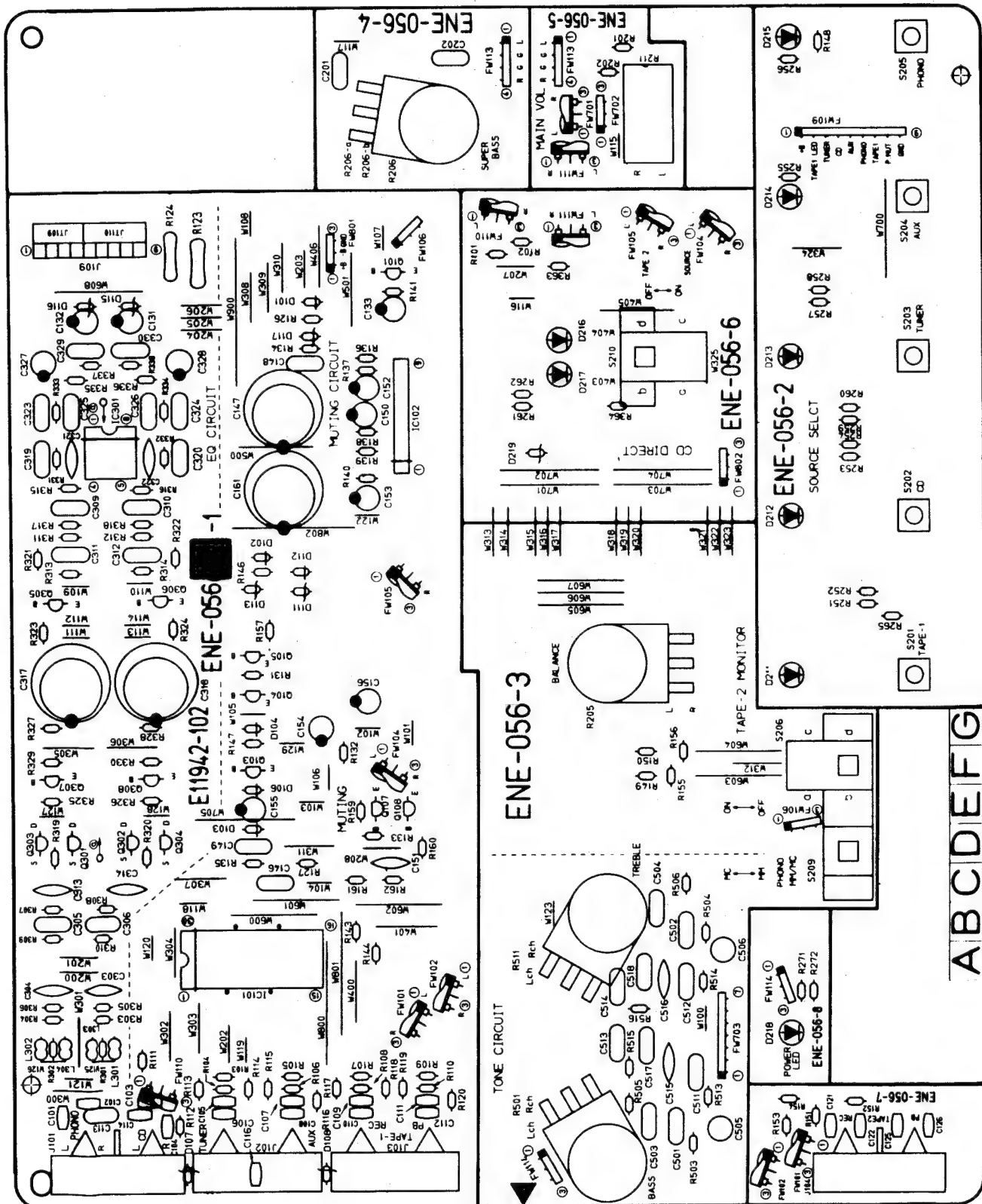
### Others

△	ITEM	PART NUMBER	DESCRIPTION	AREA
		E302057-002	CIRCUIT BOARD	
		E65508-002	TAB	
		E67764-302	WRAPPING TERMINAL	
		E67764-303	WRAPPING TERMINAL	
		E67764-304	WRAPPING TERMINAL	
△		QMC0637-004	AC OUTLET	
△		QSR0085-006U	VOLTAGE SELECTOR	

△ : SAFETY PARTS

■ ENE-056 □ Source Selector PC Board Ass'y

Note: ENE-056 □ varies according to the areas employed. See note (1) when placing an order.



## Note (1)

PC Board Ass'y	Designated Areas
ENE-056 <b>A</b>	Other Countries
ENE-056 <b>B</b>	Australia, Continental Europe, the U.K.
ENE-056 <b>C</b>	West Germany

## Transistors

Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER		
	Q101	DTA144ES	SILICON	ROHM	
	Q103	2SC2389(S,E)	SILICON	ROHM	
	Q104	DTC144ES	SILICON	ROHM	
	Q105	DTA144ES	SILICON	ROHM	
	Q107	2SC3068	SILICON	SANYO	
	Q108	2SC3068	SILICON	SANYO	
	Q301	2SK170(BL)	F.E.T	TOSHIBA	
	Q302	2SK170(BL)	F.E.T	TOSHIBA	
	Q303	2SK170(BL)	F.E.T	TOSHIBA	
	Q304	2SK170(BL)	F.E.T	TOSHIBA	
	Q305	2SD655(E,F)	SILICON	HITACHI	
	Q306	2SD655(E,F)	SILICON	HITACHI	
	Q307	2SD655(E,F)	SILICON	HITACHI	
	Q308	2SD655(E,F)	SILICON	HITACHI	

Δ : SAFETY PARTS

## I.C.s

Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER		
	IC101	LC7818	I.C.	SANYO	
	IC102	TA7317P	I.C.	TOSHIBA	
	IC301	NJM4560DD	I.C.	JRC	

Δ : SAFETY PARTS

## Diodes

Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER		
	D101	1SS133	SILICON	ROHM	
	D102	1SS133	SILICON	ROHM	
	D103	1SS133	SILICON	ROHM	
	D104	1SS133	SILICON	ROHM	
	D106	1SS133	SILICON	ROHM	
	D107	MT23.3JB	ZENER	ROHM	
	D108	MT23.3JB	ZENER	ROHM	
	D111	1SS133	SILICON	ROHM	
	D112	1SS133	SILICON	ROHM	
	D113	MTZ5.6JC	ZENER	ROHM	
	D115	MTZ13JC	ZENER	ROHM	
	D116	MTZ13JC	ZENER	ROHM	
	D117	MTZ6.8JC	ZENER	ROHM	
	D211	SLR-331VR50F070	L.E.D.	ROHM	
	D212	SLR-331DU50F070	L.E.D.	ROHM	
	D213	SLR-331DU50F070	L.E.D.	ROHM	
	D214	SLR-331DU50F070	L.E.D.	ROHM	
	D215	SLR-331DU50F070	L.E.D.	ROHM	
	D216	SLR-34YC50F165	L.E.D.	ROHM	
	D217	SLR-34YC50F165	L.E.D.	ROHM	
	D218	SLR-331DU70F070	L.E.D.	ROHM	
	D219	MTZ5.1JC	ZENER	ROHM	

Δ : SAFETY PARTS

## Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	C101	QCBB1HK-221	220PF	50V	CERAMIC	C
	C102	QCBB1HK-221	220PF	50V	CERAMIC	C
	C103	QCBB1HK-471	470PF	50V	CERAMIC	C
	C104	QCBB1HK-471	470PF	50V	CERAMIC	C
	C105	QCBB1HK-221	220PF	50V	CERAMIC	C
	C106	QCBB1HK-221	220PF	50V	CERAMIC	C
	C107	QCBB1HK-221	220PF	50V	CERAMIC	C
	C108	QCBB1HK-221	220PF	50V	CERAMIC	C
	C109	QCBB1HK-221	220PF	50V	CERAMIC	C
	C110	QCBB1HK-221	220PF	50V	CERAMIC	C

## Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	C111	QCBB1HK-221	220PF	50V	CERAMIC	C
	C112	QCBB1HK-221	220PF	50V	CERAMIC	C
	C113	QFN81HJ-103	0.01MF	50V	MYLAR	
	C114	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C121	QCBB1HK-221	220PF	50V	CERAMIC	C
	C122	QCBB1HK-221	220PF	50V	CERAMIC	C
	C125	QCBB1HK-221	220PF	50V	CERAMIC	C
	C126	QCBB1HK-221	220PF	50V	CERAMIC	C
	C131	QETB1EM-107	100MF	25V	ELECTRO	
	C132	QETB1EM-107	100MF	25V	ELECTRO	
	C133	QETB1HM-106	10MF	50V	ELECTRO	
	C146	QFN81HJ-562	5600PF	50V	MYLAR	
	C147	QETBOJM-228	2200MF	6.3V	ELECTRO	
	C148	QFN81HJ-562	5600PF	50V	MYLAR	
	C149	QFN81HK-473	0.047MF	50V	MYLAR	
	C150	QETB1HM-225	2.2MF	50V	ELECTRO	
	C152	QETB1CM-226	22MF	16V	ELECTRO	
	C153	QETB1HM-475	4.7MF	50V	ELECTRO	
	C154	QETB1CM-107	100MF	16V	ELECTRO	
	C155	QETB1HM-474	0.47MF	50V	ELECTRO	
	C156	QETB1HM-475	4.7MF	50V	ELECTRO	
	C201	QFV81HJ-104	0.1MF	50V	T.FILM	
	C202	QFV81HJ-104	0.1MF	50V	T.FILM	
	C303	QCS21HJ-151	150PF	50V	CERAMIC	
	C304	QCS21HJ-151	150PF	50V	CERAMIC	
	C305	QFN81HK-103	0.01MF	50V	MYLAR	
	C306	QFN81HK-103	0.01MF	50V	MYLAR	
	C309	QFN81HK-392	3900PF	50V	MYLAR	
	C310	QFN81HK-392	3900PF	50V	MYLAR	
	C311	QFN81HK-822	8200PF	50V	MYLAR	
	C312	QFN81HK-822	8200PF	50V	MYLAR	
	C313	QCS21HJ-151	150PF	50V	CERAMIC	
	C314	QCS21HJ-151	150PF	50V	CERAMIC	
	C317	QETBOJM-228	2200MF	6.3V	ELECTRO	
	C318	QETBOJM-228	2200MF	6.3V	ELECTRO	
	C319	QFN81HJ-472	4700PF	50V	MYLAR	
	C320	QFN81HJ-472	4700PF	50V	MYLAR	
	C321	QCS21HJ-331	330PF	50V	CERAMIC	
	C322	QCS21HJ-331	330PF	50V	CERAMIC	
	C323	QFN81HJ-153	0.015MF	50V	MYLAR	
	C324	QFN81HJ-153	0.015MF	50V	MYLAR	
	C325	QFN81HJ-272	2700PF	50V	MYLAR	
	C326	QFN81HJ-272	2700PF	50V	MYLAR	
	C327	EETB2AM-106E	10MF	100V	ELECTRO	
	C328	EETB2AM-106E	10MF	100V	ELECTRO	
	C329	QFN81HJ-222	2200PF	50V	MYLAR	
	C330	QFN81HJ-222	2200PF	50V	MYLAR	
	C501	QFN81HK-153	0.015MF	50V	MYLAR	
	C502	QFN81HK-153	0.015MF	50V	MYLAR	
	C503	QFN81HK-823	0.082MF	50V	MYLAR	
	C504	QFN81HK-823	0.082MF	50V	MYLAR	
	C505	QEN51HM-475	4.7MF	50V	NON POLE	
	C506	QEN51HM-475	4.7MF	50V	NON POLE	
	C511	QFN81HK-332	3300PF	50V	MYLAR	
	C512	QFN81HK-332	3300PF	50V	MYLAR	
	C513	QFN81HK-183	0.018MF	50V	MYLAR	
	C514	QFN81HK-183	0.018MF	50V	MYLAR	
	C515	QCS21HJ-221	220PF	50V	CERAMIC	
	C516	QCS21HJ-221	220PF	50V	CERAMIC	
	C517	QFN81HK-122	1200PF	50V	MYLAR	
	C518	QFN81HK-122	1200PF	50V	MYLAR	

Δ : SAFETY PARTS

## Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	R101	QRD167J-105	1M	1/6W	CARBON	
	R102	QRD167J-105	1M	1/6W	CARBON	
	R103	QRD167J-105	1M	1/6W	CARBON	
	R104	QRD167J-105	1M	1/6W	CARBON	
	R105	QRD167J-105	1M	1/6W	CARBON	
	R106	QRD167J-105	1M	1/6W	CARBON	
	R107	QRD167J-105	1M	1/6W	CARBON	
	R108	QRD167J-105	1M	1/6W	CARBON	
	R109	QRD167J-105	1M	1/6W	CARBON	
	R110	QRD167J-105	1M	1/6W	CARBON	
	R111	QRD167J-471	470	1/6W	CARBON	
	R112	QRD167J-471	470	1/6W	CARBON	
	R113	QRD167J-471	470	1/6W	CARBON	
	R114	QRD167J-471	470	1/6W	CARBON	
	R115	QRD167J-471	470	1/6W	CARBON	
	R116	QRD167J-471	470	1/6W	CARBON	
	R117	QRD167J-471	470	1/6W	CARBON	
	R118	QRD167J-471	470	1/6W	CARBON	
	R119	QRD167J-471	470	1/6W	CARBON	
	R120	QRD167J-471	470	1/6W	CARBON	

## Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R123	QR20077-101	100 1/4W FUSIBLE	
R124	QR20077-101	100 1/4W FUSIBLE	
R126	QRD167J-104	100K 1/6W CARBON	
R127	QRD167J-104	100K 1/6W CARBON	
R131	QRD167J-103	10K 1/6W CARBON	
R132	QRD167J-103	10K 1/6W CARBON	
R134	QRD167J-103	10K 1/6W CARBON	
R135	QRD167J-474	470K 1/6W CARBON	
R136	QRD167J-562	5.6K 1/6W CARBON	
R137	QRD167J-473	47K 1/6W CARBON	
R138	QRD167J-392	3.9K 1/6W CARBON	
R139	QRD167J-104	100K 1/6W CARBON	
R140	QRD167J-104	100K 1/6W CARBON	
R141	QRD167J-223	22K 1/6W CARBON	
R143	QRD167J-102	1K 1/6W CARBON	
R144	QRD167J-102	1K 1/6W CARBON	
R146	QRD167J-122	1.2K 1/6W CARBON	
R147	QRD167J-473	47K 1/6W CARBON	
R148	QRD167J-273	27K 1/6W CARBON	
R149	QRD167J-471	470 1/6W CARBON	
R150	QRD167J-471	470 1/6W CARBON	
R151	QRD167J-105	1M 1/6W CARBON	
R152	QRD167J-105	1M 1/6W CARBON	
R153	QRD167J-471	470 1/6W CARBON	
R154	QRD167J-471	470 1/6W CARBON	
R155	QRD167J-105	1M 1/6W CARBON	
R156	QRD167J-105	1M 1/6W CARBON	
R157	QRD167J-102	1K 1/6W CARBON	
R159	QRD167J-333	33K 1/6W CARBON	
R160	QRD167J-333	33K 1/6W CARBON	
R161	QRD167J-105	1M 1/6W CARBON	
R162	QRD167J-105	1M 1/6W CARBON	
R201	QRD167J-103	10K 1/6W CARBON	
R202	QRD167J-103	10K 1/6W CARBON	
R205	QVDBB7M-EF5B	250K VARIABLE	
R206	QVDBB7A-E24B	20K VARIABLE	
R211	QVDBA7B-AF5VA	250K VARIABLE	
R251	QRD167J-122	1.2K 1/6W CARBON	
R252	QRD167J-122	1.2K 1/6W CARBON	
R253	QRD167J-122	1.2K 1/6W CARBON	
R254	QRD167J-122	1.2K 1/6W CARBON	
R255	QRD167J-122	1.2K 1/6W CARBON	
R256	QRD167J-122	1.2K 1/6W CARBON	
R257	QRD167J-122	1.2K 1/6W CARBON	
R258	QRD167J-122	1.2K 1/6W CARBON	
R259	QRD167J-122	1.2K 1/6W CARBON	
R260	QRD167J-122	1.2K 1/6W CARBON	
R261	QRD167J-122	1.2K 1/6W CARBON	
R262	QRD167J-112	1.1K 1/6W CARBON	
R265	QRD167J-104	100K 1/6W CARBON	
R271	QRD167J-132	1.3K 1/6W CARBON	
R272	QRD167J-152	1.5K 1/6W CARBON	
R301	QRD167J-102	1K 1/6W CARBON	C
R302	QRD167J-102	1K 1/6W CARBON	C
R303	QRD167J-473	47K 1/6W CARBON	
R304	QRD167J-473	47K 1/6W CARBON	
R305	QRD167J-471	470 1/6W CARBON	
R306	QRD167J-471	470 1/6W CARBON	
R307	QRD167J-5R6	5.6 1/6W CARBON	
R308	QRD167J-5R6	5.6 1/6W CARBON	
R309	QRD167J-101	100 1/6W CARBON	
R310	QRD167J-101	100 1/6W CARBON	
R311	QRD167J-562	5.6K 1/6W CARBON	
R312	QRD167J-562	5.6K 1/6W CARBON	
R313	QRD167J-270	27 1/6W CARBON	
R314	QRD167J-270	27 1/6W CARBON	
R315	QRD167J-561	560 1/6W CARBON	
R316	QRD167J-561	560 1/6W CARBON	
R317	QRD167J-562	5.6K 1/6W CARBON	
R318	QRD167J-562	5.6K 1/6W CARBON	

## Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R319	QRD167J-222	2.2K 1/6W CARBON	
R320	QRD167J-222	2.2K 1/6W CARBON	
R321	QRD167J-272	2.7K 1/6W CARBON	
R322	QRD167J-272	2.7K 1/6W CARBON	
R323	QRD167J-273	27K 1/6W CARBON	
R324	QRD167J-273	27K 1/6W CARBON	
R325	QRD167J-273	27K 1/6W CARBON	
R326	QRD167J-273	27K 1/6W CARBON	
R327	QRD167J-180	18 1/6W CARBON	
R328	QRD167J-180	18 1/6W CARBON	
R329	QRD167J-221	220 1/6W CARBON	
R330	QRD167J-221	220 1/6W CARBON	
R331	QRD167J-153	15K 1/6W CARBON	
R332	QRD167J-153	15K 1/6W CARBON	
R333	QRD167J-184	180K 1/6W CARBON	
R334	QRD167J-184	180K 1/6W CARBON	
R335	QRD167J-471	470 1/6W CARBON	
R336	QRD167J-471	470 1/6W CARBON	
R337	QRD167J-104	100K 1/6W CARBON	
R338	QRD167J-104	100K 1/6W CARBON	
R363	QRD167J-471	470 1/6W CARBON	
R364	QRD167J-471	470 1/6W CARBON	
R501	QVDBB7C-E15B	100K VARIABLE	
R503	QRD167J-203	20K 1/6W CARBON	
R504	QRD167J-203	20K 1/6W CARBON	
R505	QRD167J-362	3.6K 1/6W CARBON	
R506	QRD167J-362	3.6K 1/6W CARBON	
R511	QVDBB7C-E15B	100K VARIABLE	
R513	QRD167J-472	4.7K 1/6W CARBON	
R514	QRD167J-472	4.7K 1/6W CARBON	
R515	QRD167J-821	820 1/6W CARBON	
R516	QRD167J-821	820 1/6W CARBON	

## Others

ITEM	PART NUMBER	DESCRIPTION	AREA
	E11942-102	CIRCUIT BOARD	
	E305983-001	HOLDER	
J101	EMN00TV-405A	4P PIN JACK	
J102	EMN00TV-402A	4P PIN JACK	
J103	EMN00TV-402A	4P PIN JACK	
J104	EMN00TV-402A	4P PIN JACK	
L301	EQL4004-220	INDUCTOR	C
L302	EQL4004-220	INDUCTOR	C
L303	EQL4004-220	INDUCTOR	C
L304	EQL4004-220	INDUCTOR	C
S201	ESP0001-018	TACT SWITCH	
S202	ESP0001-018	TACT SWITCH	
S203	ESP0001-018	TACT SWITCH	
S204	ESP0001-018	TACT SWITCH	
S205	ESP0001-018	TACT SWITCH	
S206	QSTL251-E01	PUSH SWITCH	
S210	QSTL101-E04	PUSH SWITCH	
FW101	EWR23C-20NN	FLAT WIRE	
FW102	EWR23C-20NN	FLAT WIRE	
FW104	EWR23C-30NN	FLAT WIRE	
FW105	EWR23C-25NN	FLAT WIRE	
FW106	EWR33B-35SST	FLAT WIRE	
FW109	EWR39B-20KST	FLAT WIRE	
FW110	EWR23C-35NN	FLAT WIRE	
FW111	EWR23C-16NN	FLAT WIRE	
FW113	EWR34B-20SST	FLAT WIRE	
FW114	EWR33B-13SST	FLAT WIRE	
FW701	EWR23C-10JN	FLAT WIRE	
FW702	EWR33B-13KST	FLAT WIRE	
FW703	EWR37B-35KST	FLAT WIRE	
FW801	EWR33B-10KST	FLAT WIRE	
FW802	EWR33B-13KST	FLAT WIRE	
JT109	EMV7122-004	CONNECTOR	
JT110	EMV7122-005	CONNECTOR	

△ : SAFETY PARTS

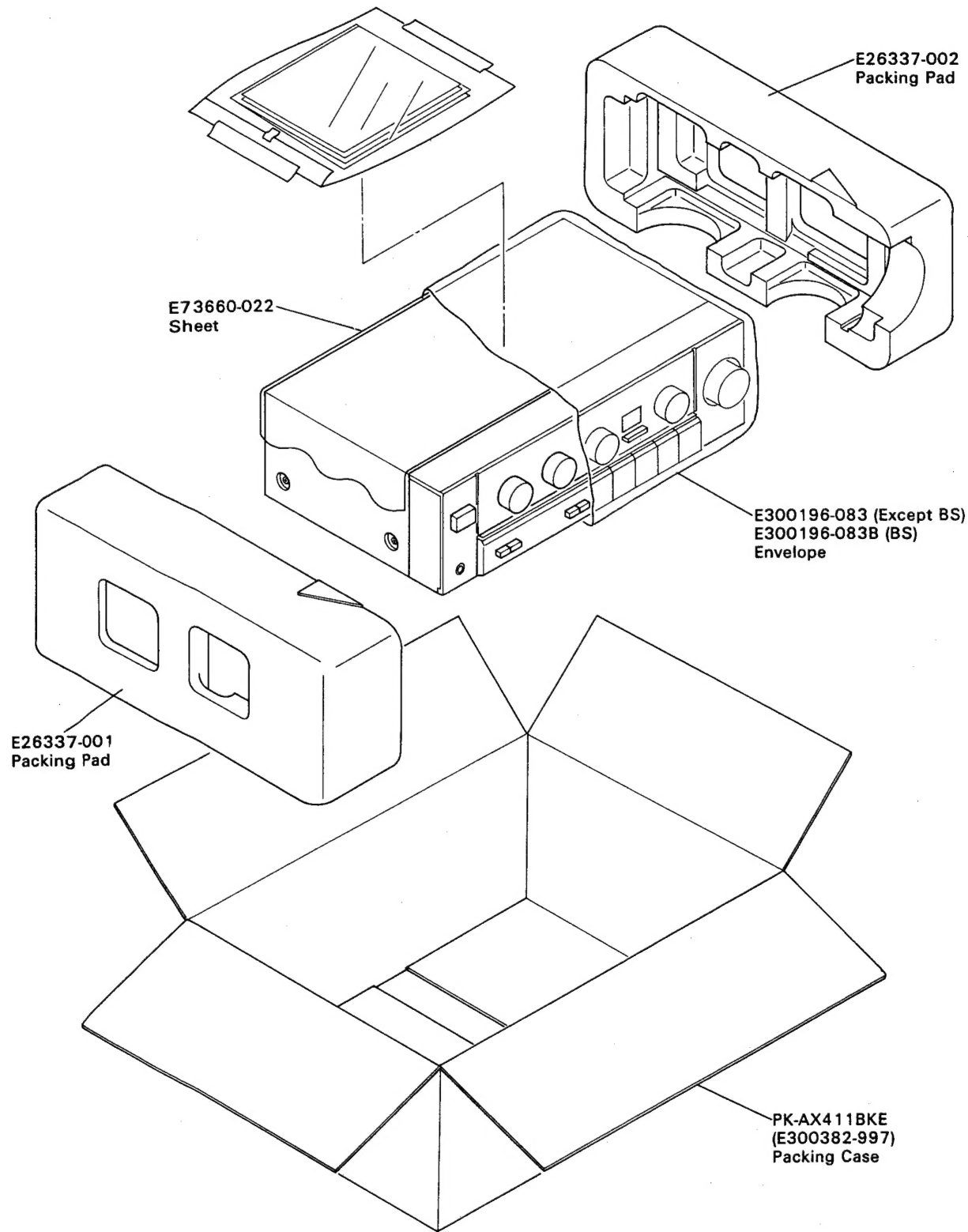
## Accessories List

⚠	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1517A	Insutruccion Book	1		Except BS
	E30580-1517ABS	Insutruccion Book	1		BS
	BT20064A	Warranty Card	1		G
	BT20029C	Warranty Card	1	for Australia	A
	BT20060	Warranty Card	1		BS
	BT20098	Warranty Card	1	for New Zealand	A
	BT20066A	EEC Agency	1		G, BS
	E43486-340A	Safety Sheet	1		BS
⚠	QZL1008-001	FTZ Insutruccion Sheet	1		G
	E04056	Siemens Plug	1		U
	E35497-019	Caution Sheet	1	220V	U
	E41202-2	Envelope	1		Except BS
	E41202-2B	Envelope	1		BS

⚠: Safety Parts

The Marks for Designated Areas			
A.....	Australia	BS.....	the U.K.
G.....	West Germany	U.....	Other Countries
E, EF.....	Continental Europe	No mark Indicates all areas.	

Packing Materials and Part Numbers



The Marks for Designated Areas			
A.....	Australia	BS.....	the U.K.
G.....	West Germany	U.....	Other Countries
E, EF.....	Continental Europe	No mark Indicates all areas.	